

REMARKS

Claims 27-52 are pending and under current examination. Applicants have amended claims 27, 34, 35, 43, 44, and 50-52. The amendments to claims 27, 34, 35, 43, 44, and 50-52 are fully supported by the originally-filed application. Support for the amendments to claims 27, 34, 35, 43, 44, and 50 may be found in the specification at, for example, p. 6, lines 12-34. The amendments to claims 51 and 52 are to correct form.

Regarding the Final Office Action:

The Final Office Action¹ includes the following actions:

- (a) rejection of claims 27-47 and 49-51 under 35 U.S.C. § 103(a)² as being unpatentable over Riley et al. (U.S. Patent App. Pub. No. 2003/0125046 A1) (“Riley”) in view of McBurney et al. (U.S. Patent No. 6,055,477) (“McBurney”); and
- (b) rejection of claims 48 and 52 under 35 U.S.C. § 103(a) as being unpatentable over Riley in view of McBurney and in further view of Hoshino et al. (U.S. Patent No. 6,081,230) (“Hoshino”).

Applicants respectfully traverse the rejections for at least the reasons that follow.

Regarding the 35 U.S.C. § 103(a) Rejection of Claims 27-47 and 49-51:

Applicants request reconsideration and withdrawal of the rejection of claims 27-47 and 49-51 under 35 U.S.C. § 103(a) as being unpatentable over Riley in view of McBurney.

The Final Office Action acknowledged at pp. 4-5 that Riley does not teach or suggest, at least, Applicants’ claimed “providing in said statistical filtering at least one further state in

¹ The Final Office Action contains statements characterizing the related art and the claims. Regardless of whether any such statements are specifically identified herein, Applicants decline to automatically subscribe to any statements in the Final Office Action.

² The Final Office Action cites §102(e), which Applicants believe is a typographical error, as evidenced by the remaining text of this rejection.

addition to said at least one location coordinate, said at least one further state being representative of said measurement errors,” as recited in independent claim 27, with similar recitations in independent claims 34, 35, 43, 44, and 50. *See* Final Office Action, pp. 3-5. The Final Office Action alleged that McBurney teaches this feature. Although Applicants do not agree with the above allegation regarding McBurney’s teaching, Applicants note that McBurney fails to teach or suggest, among other things, at least Applicants’ claimed “providing in said statistical filtering at least one further state in addition to said at least one location coordinate, said at least one further state being representative of said measurement errors, wherein said represented errors are non-zero mean errors” (emphasis added), as recited in amended claim 27, with similar recitations in amended claims 34, 35, 43, 44, and 50.

In contrast, McBurney teaches that “the user 11 recognizes that most of the errors in the sensor-determined altitude and in the GPS-determined altitude have zero mean random components that can be reduced through signal averaging or filtering.” McBurney, col. 12, lines 36-39 (emphasis added). McBurney further teaches that the state space models use zero mean variables. *See* McBurney, col. 12, lines 55-67. Applicants’ specification clearly explains this deficiency of the prior art, stating not only that “[A state] having [a] higher than zero mean value, [] is not usually contemplated in the conventional theory of statistical filters such as the common Kalman filters,” but also that through “the use of the Kalman filter with a non zero mean error value, the method guarantees very good performance . . .” Specification, p. 6, lines 29-31, and p. 7, lines 1-3.

Therefore, McBurney does not cure the deficiencies of Riley. Riley and McBurney, whether taken alone or in combination, do not teach or suggest each and every feature of

independent claims 27, 34, 35, 43, 44, and 50. Accordingly, independent claims 27, 34, 35, 43, 44, and 50 are nonobvious and should be allowable over the cited references. Dependent claims 28-33, 36-42, 45-47, 49, and 51 also should be allowable at least by virtue of their respective dependence from base claim 27, 34, 35, 43, 44, or 50. Applicants therefore respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of claims 27-47 and 49-51.

Regarding the 35 U.S.C. § 103(a) Rejection of Claims 48 and 52:

Applicants request reconsideration and withdrawal of the rejection of claims 48 and 52 under 35 U.S.C. § 103(a) as being unpatentable over Riley in view of McBurney, and further in view of Hoshino. As discussed in the previous section, Riley in view of McBurney does not render obvious Applicants' independent claims 27, 34, 35, 43, 44, and 50. Moreover, Hoshino also fails to teach or suggest the above discussed features recited in independent claims 27, 34, 35, 43, 44, and 50, which are not taught or suggested by Riley and McBurney. For example, Hoshino does not teach or suggest, among other things, at least Applicants' claimed "a processing module . . . being configured to: include in said statistical filtering at least one further state in addition to said location coordinates, said at least one further state being representative of said measurement errors, wherein said represented errors are non-zero mean errors" (emphasis added), as recited in claim 44, and "a processing module configured to . . . provide in said statistical filtering at least one further state in addition to said at least one location coordinate, said at least one further state being representative of said measurement errors, wherein said represented errors are non-zero mean errors" (emphasis added), as recited in claim 50.

Therefore, Hoshino does not cure the deficiencies of Riley and McBurney. Riley, McBurney, and Hoshino, whether taken alone or in combination, fail to teach or suggest each

and every feature of at least independent claims 44 and 50. Accordingly, independent claims 44 and 50 are nonobvious and should be allowable over the cited references. Dependent claims 48 and 52 also should be allowable at least by virtue of their respective dependence from base claim 44 or 50. Applicants therefore respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of dependent claims 48 and 52.

Conclusion:

In view of the foregoing remarks, Applicants submit that the pending claims are not rendered obvious in view of the cited references. Applicants respectfully request reconsideration of this application and the timely allowance of pending claims 27-52.

If there are any remaining issues or misunderstandings, Applicants request the Examiner telephone the undersigned representative to discuss them.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

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